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ABSTRACT

The purpose of this 16-year study was to investigate the developmental progress of a group of children reared in severely deprived environments during infancy and early childhood in order to evaluate their adjustment to family, school, and community by age 15. The subjects were 31 children ranging in age from 1 year 7 months through 5 years 11 months who were placed in foster homes following a therapeutic program within the institution. The children's readiness for placement in foster homes was based on a demonstration of their capacity to relate to people with some emotional depth, a demonstration of their capacity for constructive effort through play, and a rating of mental health as measured by the "Flint Infant Security Scale" and the Pre-School Mental Health Scale. Data was collected from home and school records, measures of security, social maturity and intelligence, and responses on the Rorschach. Analyses of the data were made at ages 6, 9, 12, and 15, using the Security Theory of Mental Health. The results of the study showed that by age 15: (1) the group as a whole had developed a healthy capacity for in-depth affiliation with their foster families; (2) there was a three-year lag from the expected norm in the acquisiton of social maturity and a comparable lag in concept formation; (3) there was a one-year lag in school achievement; and, (4) the subjects emerged from common early intellectual functioning to assume a pattern which demonstrated functioning close to their own potentials.
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A Longitudinal Study of a Group of Children Reared in a Severely Depriving Environment During Infancy and Early Childhood: Sixteen Years' Investigation

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Introduction

This study, started in 1957* to test the validity of a revised form of the Flint Infant Security Scale, demonstrated that a group of infants (birth - 2 years) being reared in a severely depriving environment showed increasing symptoms of mental ill health, the longer they remained in the institution. Such observations supported data from other studies of young children living in institutional environments which claimed to be predictive of future failure in intellectual, emotional, and social development.

Because we observed wide discrepancies in the rate of decline in mental health status over two years as the children remained in care, we believed that the existing pessimism about future failure of development was not necessarily valid. Although each child demonstrated a decline in mental health status from the first months of life to 2 years of age, each had a highly individualized rate of decrease, and there were wide individual differences in infant mental health scores among children who had comparable experiences for similar lengths of time. It appeared that some children were more resilient under stress and more resistent to a maternal and stimulus deprived environment than were others. We believed that these children could respond to a rehabilitative programme designed to move them in the direction of normal development.

As a result, we obtained money for a total rehabilitative programme within the Institution designed to make sweeping changes in the children's physical and psychological environment.

The original environment had failed to recognize that children acquire human assets only when their caretakers are aware that childhood needs must be met. A constant stream of uncommunicative caretakers had moved through the children's lives giving efficient but hurried routine care. As a result no close warm relationship existed between the children and the adults. The environment was devoid of play materials and offered no opportunity for the children to employ any effort toward self-help. Hence apathy and listlessness characterized their behaviour. Developmental assessment was impossible because of this, - the children on the whole appeared grossly defective. During their waking hours the children were mainly in bed; they were seldom

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* The Security of Infants, Betty M. Flint, University of Toronto Press, 1969.

out of their own nursery and almost never outdoors. Life was drab. Nothing new or different became part of their experience (except the changing caretakers). Toilet training and eating was the same routine for each child regardless of age and readiness. Although the children had lived together since birth, they derived no satisfaction from contacts with each other and no meaningful interractions took place between them. No child was recognized as an individual with possessions or clothes of his own. Everything was shared and those children capable of walking were herded about in groups on their rare emergence from their nurseries. Despite adequate nutrition, the children were emaciated, limp and underweight. They were socially flat and unresponsive to all aspects of their environment. Speech was non-existent and vocalization infrequent.

The rehabilitative programme which lasted almost three years gradually brought about dramatic changes in the children's behaviour which enabled us in time to remove all 85 (ranging in age from a year to five years) of them from the institution to foster and adoptive homes. In order to do this, the caretaking staff was doubled and trained to meet the emotional, physical, and intellectual needs of the children. The constrictions which had kept the children remote from human stimulation as well as from play with materials were removed and a deliberate programme of stimulation through play and adult intervention began. Their diet was modified to accommodate to the developmental levels of the children. Self help was encouraged whenever the opportunity arose in dressing, eating and toileting activities. Clothing and play materials as well as beds and living quarters were allocated to each child so he might have something unique and personal with which to identify. Staff members and volunteers were assigned to individual children. This enabled the children to be taken into the community with people they could trust. Affectionate interaction between adults and children was encouraged and a deliberate attempt to encourage the use of language by labelling and identifying objects and activities was made.

The second phase of this study was planned as placement of the children in homes became a feasible plan.

Purpose

To study the developmental progress of a group of children reared in a severely depriving environment during infancy and early childhood in order to evaluate their adjustment to family, school, and community by age 15.

Subjects

31 children ranging in age from 1 yr. 7 months through 5 yrs. 11 months who were placed in homes as the result of the therapeutic programme within the institution.

These children were judged ready for placement on the basis of three criteria:

(1) demonstration of a capacity to relate with some emotional depth to the people around them.

(2) demonstration of a capacity for constructive effort through play and the use of play materials.

(3) a measure of mental health revealed through the use of the Flint Infant Security Scale and the Pre-School Mental Health Scale (I.C.S.).

The 31 children and families were selected on the basis of their availability for interviews by the research and guidance worker.

Method

Data was collected at the following ages on a pre-planned procedure. In addition, a stream of incidental information was collected on the basis of non-scheduled contacts - such as telephone conversations, hospital visits, records from guidance clinics, physician's reports, special schools and community associations.

	AGES									
	6	7	8	9	10	11	12	13	14	15
Bi-Annual Home Records	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
School Records	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Security Measures	✓			✓			✓			✓
Social Maturity				✓			✓			✓
Intelligence Ratings	✓			✓			✓			✓
Rorschach	✓			✓			✓			✓

Information was gathered for research purposes and guidance was offered by the same person throughout the study. Binet, WISC, and Rorschach assessment were gathered by the psychologist associated with the study.

Nature of the Families

Most of the mothers had been volunteers in the institution and were prepared to take "high risk" children. All agreed to provide information for the research. All had a Christian value system which was important to them. None were young. All the fathers had stable jobs and owned homes. With the exception of 3, all belonged to the lower socio-economic level of society. Nearly half were childless.

Over the years, the homes remained relatively stable. Occasionally mothers would supplement the family income with part-time jobs (only half the group did so). Two of the families lost a parent by death and one by separation. Of the six children in foster homes (most of the children were adopted), three left their homes for institutional care and later group homes.

The role of the Child Care Worker

One of the unique aspects of this study has been the continuity provided by the child care worker associated with it. As the director of the therapeutic programme she became well acquainted with the children and highly concerned for their welfare. She was involved in their placement in homes and finally became the collector of data and guidance worker for the remaining 9 years of the study. Well steeped in the security theory, and backed by the

research team which worked as consultants to support her efforts, she was able to establish an enormously trusting relationship with the families and their children which undoubtedly contributed to the successful outcome of this project.

Hypothesis

Most of these children were expected to make a satisfactory adjustment to home and community despite their early severe deprivation. The support of the child care worker and research team was expected to contribute to this success.

Method of Analysis

The descriptive data from the records collected in home interviews was used in a variety of ways. Statements had been recorded which were descriptive of the children's actual behaviour. Interpretive statements made by either the mother or the child care worker were few. Those present were not used in our analysis. The statements were collected on record forms developed by a research team at the Institute of Child Study. These records were used consistently with slight modifications from ages 6 through 15. Analysis was made at ages 6, 9, 12 and 15 years using the Security Theory of Mental Health which had provided the theoretical base for the study from its inception.

Behavioural statements were assigned to categories appropriate to

1) the concepts of The Security Theory and to
2) the concepts of the Vineland Social Maturity Scale.
3) Rorschach records were analysed at 6, 9, 12, and 15 years of age to identify the level of maturity of the children's concept formation.
4) Intelligence tests full scores and sub-scores were examined on the Binet and WISC.

Results of these analyses were examined at age 15 to describe the group on the basis of the theoretical assumptions of the Security Theory, to compare it with external measures of I.Q., S.Q., and Rorschach, and to examine it longitudinally to look for developmental change from 6 through 15 years.

Confirmation of our Hypothesis

Should this group at age 15 demonstrate trusting relationships with their families and other adults; should they be motivated to learn both at school and in self-chosen activities; should they demonstrate feelings of confidence in their approach to the challenges of their lives; and should they be making use of their intellectual capacities, our hypothesis would be substantiated.

Security Measures

The Blatz* concept of Security modified by Flint and colleagues to be more appropriate to infants and young children was used as the theoretical base for the therapeutic programme within the Institution as well as for the guidance of parent practices after the children's placement in homes. The longitudinal nature of our study necessitated the development of a theory that was appropriate from infancy through maturity. Hence the following assumptions were made.

From birth through the period of infancy, mental health depends on the development of an immature dependent relationship through which a mother provides consistent, dependable attention to an infant's needs. By a caretaker's consistently successful attempts to reduce a young child's primary state of insecurity a relationship develops between mother and child in which the child becomes immaturely dependent on his mother. Through such successful caretaking, healthy feelings are generated which reflect an infant's warm feeling of dependent trust in his world and good feeling of self trust (confidence) in himself. Hence from consistent, dependable need-reduction, an infant gradually learns to anticipate relief from insecurity and discomfort and begins to associate it with the mother on whom he has learned to depend. By the time the child experiences this association he can be described as being in a state of Immature Dependent Security, the first step in a developmental sequence of healthy adjustment. The second step in the sequence of healthy adjustment emerges as the child becomes aware of the relationship between the dependable mothering agent and the fact that his recurring states of discomfort are consistently relieved. He begins to anticipate that his needs will generally be met, that discomfort is quickly relieved and the world in which he lives is benignly disposed towards him. Such a state of mind brings security through his feelings of Dependent Trust. He can now put his trust in a dependable world which allows him the comfort of expressing both negative and positive feelings without the possibility of rejection.

Such a state of Dependent Trust extends throughout the child's later development and becomes increasingly flavoured with feelings of competence and self reliance. As a child grows in competence to deal with his daily problems, he gradually relinquishes his reliance on his parent as an agent for his activity and as a buffer against the consequences of it, and increasingly depends on his self-initiated effort to solve his problems and to reward his effort. Such self-rewarding activity further enhances his feelings of self-worth enabling him to accept the consequences of his behaviour, increasingly set his own goals, admit mistakes and tolerate criticism.

As a child moves from infancy to maturity he is a mixture of the three psychological states described as Immature Dependence, Dependent Trust, and Self Worth and his mental health can be considered as a balance of these states. It is our belief that the balance changes from infancy to maturity in the direction of less Immature Dependency toward increasing amounts of Dependent Trust and Self Worth. Furthermore,

*Human Security, W. E. Blatz, University of Toronto Press, 1966.

we believe these psychological states to be reflected in a child's maturing behaviour as he interacts with the persons and objects in his world.

Developmental Aspects of Security Theory

The elaboration of Security Theory developmentally imposes the necessity to recognize changes in status between parent and child as well as the increasing internalization of children's feelings as they are reflected in emerging competencies, self confidence, and effort. We know that a child is immaturely dependent on his caretakers from early infancy through to maturity; we also know that this reliance, the nature of which is for specific care and directions, decreases through time from infancy to maturity; what we do not know is the point in time where this quality changes to the kind of relationship which we have chosen to call Dependent Trust. The quality of Dependent Trust replaces in large part the necessity for Immature Dependence while allowing the child to perpetuate a comfortable relationship with his caretakers. Immature Dependence has been characterized by immediate need for physical assistance and specific directives about behaviour. When a child has begun to internalize the values of his parents through living with reliable, trustworthy and dependable people whose directives he can predict, he has begun to make a shift in his relationship to a more mature form of function.

A Dependent Trust relationship implies less leaning upon the directives of one's parents accompanied by more independent action which arises from the knowledge that his activities and feelings will largely be supported and approved of by his parents. Such a relationship cannot take place until sufficient of the parent values and the home atmosphere has been internalized that the child can work within a frame of reference which is relatively congenial to that of his family. When this state of mind has been achieved, the child now finds support for his mental health in two ways; one through the feelings of compatability with his parents and their goals for him; secondly, by relying on the internalized values which he has accepted during his life with them. Such a state does not rule out the fact that the child is putting forth considerable effort in directions which are chosen by himself, particularly in peer relationships which may conflict with parent values. It does imply that a large amount of his self directed activity will be congenial to that of his parents. It does not preclude the fact that some of his self-directed activity will be in conflict with the directives and values of his parents. Hence, we find children in the Dependent Trust Stage, carrying sufficient feelings of confidence that they can both accept and question the nature of parental controls.

Because effortful behaviour is a demonstrable part of a healthy personality it is therefore an integral part of a security theory from infancy through maturity. Throughout a child's life it is associated with both Immature Dependence and Dependent Trust; it develops out of the first relationships an infant forms with his mother when he learns through her care and consistency that he is living in a dependable, predictable and comfortable world. Such predictability allows him to define the limits of his world and to interpret the meaning of his experiences. His mother's interest in him demonstrates to him further more that he is a person of worth. Such feelings of self worth are attended by confidence and curiosity. The direct outcome of these kinds of feelings is the child who is self directed in the exploration

of his world, both in its social aspects and its material and play aspects. As a child grows up and the quality of his relationship with his parents changes from a predominance of Immature Dependence to a predominance of Dependent Trust, effortful behaviour continues to be associated with both. The Dependent Trust relationship allows a child to feel that his effort will largely be supported by his caretakers, and gives him the 'go ahead' to become increasingly self directed in his tasks of growing up through experiences in peer relationships, school activities and family and community living.

Analysis Security Measures

The behavioural statements were lifted from the records at 6, 9, 12, and 15 years of age and assigned to the Security Categories of Immature Dependence, Dependent Trust, Effort and Self-Worth. Three different raters made decisions re the placement of the items in the categories. The final level of inter-rater agreement was Effort (Self Worth) .99 (Pearson r) Dependence Categories .96 (Pearson r)

Results

From 6 through 15 years of age these children share an intensely dependent relationship with their parents. In the early years this is largely an immature dependence consisting of the acceptance of direction and care. Between 9 and 12 years of age there is a significant shift in quality to the more mature form of dependency which we have named dependent trust. A high level of effortful behaviour is evident from 6 through 15 years of age suggesting that effort is a reflection of comfortable feelings of self-worth.

Social Maturity Measures

The Vineland Social Maturity scale purports to measure Social competence in two dimensions, personal independence, and social responsibility. Thinking developmentally, social maturation has 2 major dimensions - 1) from dependence to independence i.e. from the recepient of care to competence in personal care through self-help, 2) from irresponsibility to responsibility in the sharing of group action to becoming a contributing member of society in adulthood. The behavioural statements from the children's records were applied to the Social Maturity Categories.

Results

The group as a whole scored lower than age expectancy at ages 9, 12 and 15 years. By age 15, the difference approximated 3 years - i.e. S.Q. of 12 years C.A. of 15 years. This discrepancy between age and social maturity increased from 9 through 15 years as if once a certain level of maturity was attained further attainment of maturity slowed down. In addition, a discrepancy between I.Q. and S.Q. scores was evident in 85% of the group which favoured higher I.Q. This has been interpreted as indicating consistent underachievement of social maturity.

Such results lead to the specudlation that this reflects a permanent deficiency which could be attributed to the early lack of social awareness amongst the children within the institution. It appears that despite the

children's ability to invest themselves deeply in family life after placement in homes, they have encountered consistent difficulty in peer relationships. This conclusion is reinforced by the fact that few of these children have had anything but a casual involvement in community or group activities.

Intellectual Function

The Binet & WISC test results were examined in terms of full score and sub-scores.

It was anticipated that the severity of the early deprivation which had led to their being described as "deficient intelligence, lack of affect, a dearth of drive and constructive behaviour, and an almost complete inability to learn" would result in depressed later function with evidence of large discrepancies in different cognitive abilities. The reports of other investigations led to the expectation that permanent disability in language (both expressive and receptive) would be present and decided weakness in abstract function would be observed. It had to be kept in mind that although the original conditions present in the institution were such to inhibit cognitive development, the therapeutic programme attempted to relieve these conditions and prepared the children for readiness to relate to family and school experience.

Results

From 6 through 12 years of age the mean I.Q.'s are within the average range (93-95) while the distribution of scores assumes a normal curve. The mean score on the WISC at 15 years was 109 with positive skewing of the curve to the upper end of the distribution (71-121). This finding shows superior function to any other such group reported in the literature. There is a surprising lack of significant improvement in performance from 6 through 15 years which indicates that the greatest growth in the intellectual function took place before the age of 6 years while some of the children were still in the rehabilitative programme within the institution. Our data on the vulnerability of verbal abilities supports the findings elsewhere, but with some reservations. Whereas most other studies report permanent disabilities in language areas, our study demonstrated this group to have unexpected strength in items indicative of verbal reasoning and abstract abilities. There is a significant discrepancy between verbal and performance items at 15 years in favour of performance.

By age 15, of 23 children, 15 were enrolled in academic schools, 2 in trade schools, and 2 in vocational schools. They were on an average a year behind the expected level of achievement - 13 were performing satisfactorily, 8 poorly, and 2 unsatisfactorily. After 15 years of age (at approximately grade 9) all but 4 of the 23 children transferred from the academic school stream to vocational schools.

Discussion

It appears that the intellectual function of these children has not been significantly depressed (defined as performance in line with age norm expectancy) on the 15 year WISC. Success on the Vocabulary item was very slightly below age norm expectancy, indicating no serious disability in this aspect of intellectual function. Unexpectedly, this group of children showed superiority on the Block Design subtest at 15 years of age. This, supported by relatively high levels of performance on Similarities would imply unimpaired function in terms of abstract abilities. This runs contrary

to reports of other studies of deprived children. A further strength not noted in other studies was the high level of motivation shown by the children throughout the testing. Concentration on the task of testing was generally noted on all assessments.

Relationship between Security, Social Maturity, Intellectual Function and Time in the Institution.

Spearman rank order correlations were used to investigate the relationship of the above measures used to assess the children's progress. Correlations between these variables and time in the institution both before and after therapy were run.

Results

Internal Measures

The anticipated high relationship between Dependent Trust, Effort and Security Rating was confirmed from 6 through 15 years of age.

Immature Dependence (reliance on parental care and direction) discourages effort by 6 years of age and continues to do so with increasing success through 9, 12 and 15 years of age.

The Immature Dependency, considered essential to early healthy emotional development changes to the more mature Dependent Trust phase somewhere between 9 and 12 years of age. Since effortful behaviour is associated with Dependent Trust and is considered the manifestation of good feelings of self-worth, the early emergence of a Dependent Trust relationship between parents and child is a healthy direction.

External Measures

The measures of Social Maturity developed by Doll have provided an external source of validation for our Security Measures as have also the Intellectual measures. Our group demonstrates the expected high relationship between S.Q. and I.Q. which has been demonstrated in other studies. The positive relationships between Social Maturity and Security ratings of our group confirm our expectations that the mental health assets represented by the security rating coincide with social maturity. Furthermore the positive relationships demonstrated between Dependent Trust, Effort, I.Q. and S.Q. confirms our expectations. The negative relationship between Immature Dependence and S.Q. is expected as Immature Dependence implies a reliance on parents for help, support and direction and would not be likely to coincide with advanced Social Age.

The significant discrepancy between S.Q. and I.Q. of the whole group in favour of higher I.Q. than S.Q. indicates consistent underachievement in the social realm for this group. Such a maladaptive pattern could probably be attributed to their common early deficiency. This pattern is significantly related to lack of Security and Effort.

Time in the Institution

To examine the assumption that the length of time spent in early institutional care might be directly related to later failure in adjustment our data was examined in four dimensions: Time in the Institution, Time in Therapy, Age at Discharge, Time before Therapy.

Results indicated that the longer the children had been in the institution before therapy began, the longer the period of time was required for therapy, and the older they were on discharge to homes.

Effortful behaviour shows a relationship to the therapy programme at 6 years of age and this relationship almost disappears by 15 years. This permits the assumption that the experiences that took place after the therapy programme were even more powerful in the final healthy outcome than was the time in the therapy programme.

A further relationship between low I.Q. and prolonged institutional care prior to therapy disappears by age 15, indicating that measures taken within the therapeutic programme to stimulate the children and the experiences following were more powerful contributors to their 15 year intellectual level than were their early depriving experiences.

Concept Formation

The nature of the children's concept formation was examined at 6, 9, 12 and 15 years of age by means of Rorschach analysis on 10 children living in their homes.

The longitudinal nature of this development ran contrary to that of "normal" children in the initial stages and later conformed in some aspects to the expected norms.

The method of analysis used by Ames, Metraux and Walker was used and norms established by them were accepted.

Results

At six and nine years of age this group demonstrated a reversal of the normal sequence of concept development. Whereas normal children reflect the beginnings of integrated thougnt by nine, they have moved from constriction at 6 years to considerable diversity and complexity in thinking and this is accompanied by improved keenness and quality of concept. The Institutional children, on the contrary, demonstrated evidence of diversity and complexity at six years accompanied by bizarre content while at nine years their thought had grown more constricted and more simplified (concrete). During this time keenness and quality of content was not sacrificed, rather both improved.

By twelve years of age a healthier and more mature pattern was evident. Growing diversity and flexibility of thought was in evidence and little remained of the original confusion and distortion of the 6 year olds. The concreteness of the nine year old stage had been negotiated in a salutary manner.

Examination of the responses at 15 years hoped to reveal the full degree of reversibility of the early ill effects. Analysis followed the same pattern as that of 6, 9, and 12 years.

The 15 year old pattern more closely resembled that of a typical 12 year old profile than that of a 15 year old. Such results led to the speculation that steady progress had been made in the organization of conceptual function from ages 6 through 12 years, at which time further maturation failed to occur. Hence, although the level of function has achieved a normal stage in the developmental sequence, the functioning is 3 years below that expected for their Chronological Age level. The characteristic picture of a 15 year old according to Ames is one of a child going through a period of temporary restriction of activity and withdrawal from authority figures. He is becoming aware of his problems and recognizes the necessity to take responsibility for finding solutions. He not necessarily finds solutions. He is often self-critical and introspective and very sensitive to his own emotional reactions. It is an age of withdrawal and reflection.

Contrary to his pattern, our subjects do not evidence the trend towards withdrawal and reflection but rather reflect the more active mood of the 12 year old. Furthermore, these subjects are typically outgoing in effort and impulsive in reactions to stimuli. In addition, the emotional responses suggest a weakening in their affective life. While they appear alert to external stimuli, they seem prone to participate impulsively at a superficial level without a corresponding engagement of emotional depth. Qualitatively, the records reflect children with a strong dependence on the structure of reality without much ability to interject subjective material for the purpose of elaboration. Complexity of thought associated with increasing awareness of deeper levels of meaning to experience seems lost to these children. They seem to be relying on the structures provided for them rather than at 15 years be in the process of generating structures from the resolutions of their own inner reflections.

It can be concluded that these children have survived and developed healthy function within their adoptive families. Although conceptual development is immature (and coincides with level of social development) it is soundly in the sequence of normalcy. These children may always need external systems for their orientation and direction. Residual weaknesses in lack of imagination and reflection may remain a characteristic forever. Sophistication in behaviour and subtlety of thought are probably lost.

The implications of the results of the study of concept formation becomes more meaningful when we relate it to the level of social maturity and intellectual function achieved by these children by 15 years of age.

We observe the I.Q.'s of the children in this particular group (10) rise steadily from 6 through 15 years of age to the time when the group norm is within the high average range. In these terms the children should compare favourably with normal 15 year olds. Teachers and parents might expect comparable and favourable performance with other children.

However, on examination of the nature of intelligence tests one recognizes the highly structured nature of the expected tasks and responses - the structure in which this particular group functions most effectively. In contrast, the Rorschach test requires the child to draw on his unique inner experiences to impose a structure upon his responses as he interprets the material. Such tasks tap the weakness of these children. This, in conjunction with the Social immaturity of the children at 15 years indicates a capacity to function appropriately in structured situations but to react less maturely in situations requiring independent decision-making, insight, and judgement.

Results

Our sixteen year study, focussing on depth of affiliation, feelings of self worth (self concept) and intellectual function have permitted some conclusion about each aspect.

1. The strongest evidence over the years has pointed to the fact that the group as a whole has developed a healthy capacity for indepth affiliation with their families. This is reflected by the high level of dependence and trust over the years. Only four of the children have failed to form a healthy dependence on their families.

2. The quality of this dependent relationship changes from a predominance of immature dependence at 6, and 9 years of age, to a healthy dependent trust relationship at 12 and 15 years of age.

3. There is a consistent lag in the acquisition of social maturity over the years which is approximately three years behind by 15 years of age. This is reflected in a less successful capacity for peer relationships than for adult relationships.

4. There is a comparable lag in the level of maturity reached in their concept formation by age 15. The organization of their perceptions as reflected in concept formation assumes a pattern at 15 years of age which is comparable to that of 12 year olds. This fact considered in conjunction with their level of social immaturity is assumed to reflect a lag due to common early deficits which have proven impossible to overcome by age 15. The strength of their dependent trust relationships might possibly contribute to this significant lag.

5. The children all reflect a high level of effort from six through fifteen years. This is noted in the analysis of the data collected on the Home Questionnaire as well as having been noted consistently by the psychologist at 6, 9, 12 and 15 years. It is further reflected in school achievement, where despite enormous early deficits all the children have remained in school and by age 15 are approximately a year behind the expected norm.

6. Their level of intellectual function by both ages 12 and 15 years approximates a normal curve of distribution. Such a finding would lead to the conclusion that they have emerged from their common early intellectual deficiency to assume a pattern which demonstrates each child's functioning close to his own potential.

There is marked difference between their verbal and performance tasks. Despite this there is no appreciable deficiency in language capacities or abstract abilities. The group has become competent in the manipulation of verbal symbols although limited in their capacity to use language with flexibility and with enriched fluency.

7. The success of this research project, calculated in benefits to the children who would not have been adopted had it failed, can undoubtedly be attributed in part to the sensitivity and persistence of the child care worker associated with the study. The parent questionnaires display enormous trust in her judgement and a recognition of her genuine concern for their families.